

Applicant: Oppermann et al.  
U.S.S.N.: 07/995,345  
Filed: December 22, 1992  
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*NE  
rule  
121* In claim 86, line 1, after "comprising" insert  
--a pair of polypeptide chains disulfide bonded to form  
a dimeric species, at least one of said polypeptide  
chains comprising--.

REMARKS

Claims 22-26, 28, 29, 34, 35, 45, 50, 51, 81, 82, 85, 86 and 96 currently are pending in the instant application. Claims 22, 85 and 86 have been amended in response to the Examiner's rejection of the claims in the above-referenced Office Action. In particular, claim 22 has been amended to remove the objectionable reference to "substantially free of other contaminating proteins" and to more particularly describe the protein claimed. Basis for the amendment appears on page 67, lines 5-24, and on p. 65, lines 13-24. A substitute page 94, containing the amended claim 22 and claim 23 but not the deleted claims 19-21, is enclosed for the Examiner's convenience. Claims 85 and 86 have been amended to more particularly describe the proteins claimed and to further distinguish them over the art. Basis for the amendment to these claims appears, for example, on p. 13, lines 6-8.

Reconsideration of the application and allowance of the claims as amended respectfully is requested. Applicants address each of the Examiner's rejections in turn below.

Rejection of the claims  
under 35 U.S.C. §112, second paragraph

The claims presently stand rejected under 35 U.S.C. §112, second paragraph, as indefinite, for failing to particularly point out and distinctly claim the invention. Applicants respectfully traverse the rejection to the extent it is maintained over the claims as amended.

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As amended, claim 22 now particularly describes the protein claimed as produced by recombinant DNA in a host cell and isolated from said host cell, and having a particular amino acid sequence and conformation. Applicants also have amended claim 22 to recite the sequence of COP5 and COP7 in response to the Examiner's request, and in keeping with the Patent Office's policy that claims be self-contained to the extent possible. In keeping with the Examiner's request during prosecution of the parent of this application, USSN 315,345, now U.S. Pat. 5,011,691, Applicants have omitted from the recited sequences the dashes which appear in the COP5 and COP7 sequences as presented in the specification. As described on page 8, lines 30-33, the dashes are included only for alignment purposes when comparing sequences and have no other function in describing the sequences. Applicants respectfully submit that the amendment to claim 22 overcomes the outstanding §112 rejections to this claim and claims 23-26, 28, 29, 34, 35, 45, 50, 51, 81, 82 and 96 which depend from claim 22.

Rejection of claims 85 and 86 under 35 U.S.C. §102(e)

Claims 85 and 86 presently stand rejected under 35 U.S.C. §102(e) as anticipated by U.S. Pat. No. 5,013,649 to Wang et al. Applicants respectfully traverse this rejection to the extent it is maintained over the claims as amended.

Claims 85 and 86, as amended, recite a protein, comprising a pair of polypeptide chains disulfide bonded to create a dimeric species, at least one of the polypeptide chains comprising part of the amino acid sequence corresponding to OP-1. Claim 86 differs from claim 85 in that it requires a longer sequence. U.S. Pat. No. 5,013,649, issued in the name of Genetics Institute, is directed to the DNA sequence for BMP-2A and BMP-2B, two of the four DNA sequences disclosed in WO88/00205. The

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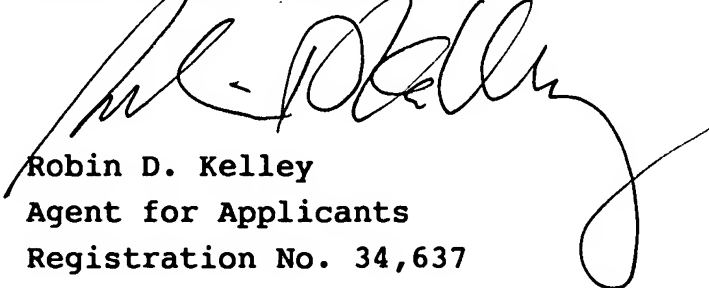
proteins encoded by these DNAs differ in their amino acid sequence from the OP-1 sequences claimed in claims 85 and 86. Moreover, the '649 patent discloses neither the DNA nor the amino acid sequence for OP-1.

For a rejection to be proper under 35 U.S.C. §102, the cited reference must identically disclose the claimed subject matter. In re Arkley, et al., 172 U.S.P.Q. 524,526 (CCPA, 1972). The '649 patent does not identically disclose the claimed subject matter of claims 85 and 86 and this reference, therefore, does not meet the Arkley test.

Applicants respectfully submit that the claims as amended herein are free of the prior art, satisfy the requirements under 35 U.S.C. §112, and now are in condition for allowance. It is respectfully requested that the application pass to allowance forthwith.

The Examiner is urged to call the undersigned agent at (617) 248-7000 to address any questions regarding this response.

Respectfully submitted,

  
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